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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BOUTSIKARIS, LEONIDAS

ART UNIT PAPER NUMBER

2872

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/822,044

Applicant(s)

ERICKSON ET AL.

Examiner

Leo Boutsikaris

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In a telephone interview with Applicant's attorney, Mr. Joel Bock, on 7/12/2006, the issue of whether there was support in the specification for the amendments of 12/29/05 was discussed. The examiner agreed that there was enough support and indicated that the 112, first paragraph, rejection in the Office Action of 3/31/06 had to be withdrawn. However, the examiner only suggested that he would have to conduct prior art search for the new limitations (which was not done in preparing the Office Action of 3/31/06, in view of the 112 rejection), and if new prior art was found he would then withdraw the final rejection and send a non-final rejection, or issue an allowance if no prior art was found. As indicated below, the rejection based on one of the prior art references, Drinkwater (US 6,369,919), used in the previous Office Action, is maintained, and therefore the present Office Action is final. The examiner wishes to apologize for any misunderstanding he may have caused.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Drinkwater (US 6,369,919).

Drinkwater discloses a device for limiting the reproducibility of information in the form of a security hologram (Fig. 1) comprising a semi-rigid carrier; and a holographic element 2 coupled to the carrier, the holographic element including within a planar area defined by the holographic element a first set of optical information in a first coded pattern (producing the image of the letter "A") and including within portions of the planar area defined by the holographic element a second set of optical information in a second coded pattern (producing the image of the letter "B") that is positioned in superimposed relationship with the first set of optical information (see Fig. 1A, and how the holograms reproducing "A" and "B" are superimposed on each other), wherein the superimposed first and second set of optical information result in a pattern of light (line 61, col. 9 to line 23 col. 10, lines 36-58, col. 11).

Regarding claims 2-3, the micro-patterns producing the two images are holographic patterns, which are produced by design algorithms, which may be the same or different depending on the type of the hologram.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drinkwater (US 6,369,919) in view of Moon (US 2004/0233485).

Drinkwater discloses all the limitations of said claims except for specifying that the holographic micro-patterns are made using photolithography, printing, solvent based surface deformation or laser ablation. Moon discloses an authentication device 8 comprising two sets of optical information (code 1, and code 2), representing patterns of light, e.g., bar codes, see Figs. 4, 36, [0149]. Furthermore, Moon teaches that the gratings can be imprinted on the substrate ([0057]), or that the gratings can be disposed or formed within or on the substrate by different ways, e.g., written, impressed, embedded, imprinted, etched, grown, deposited ([0057]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use printing, photolithography, solvent based etching or laser based ablation to form the holographic patterns in Drinkwater's device, as taught by Moon, since all the above methods are widely used in forming microstructures within or on a substrate in microoptics.

Claims 4-6, 14-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drinkwater (US 6,369,919) in view of Daniel (US 6,280,891) and further in view of Jung (US 4,171,864).

Regarding claims 4, 17-20, 23, Drinkwater discloses all the limitations of said claims except for teaching a reader system, used in conjunction with the security hologram. Daniel discloses a security hologram affixed to a document (Figs. 1, 3) used in conjunction with a reader system which includes a light source 17, a first and a second detector positioned at respective predetermined distances from the location of the holographic element (provided on the surface of carrier 3), the detectors being provided on CCD sensor 18 (Fig. 8, lines 44-56, col. 6). Each detector corresponds to a respective angle of incidence for the reading light and is at a

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predetermined distance and orientation relative to the holographic element. The security device of Drinkwater is such that information is read off the device depending on the angle of incidence of the reproducing light (see Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to read the security document of Drinkwater via a reader device as taught by Daniel, for a more efficient and accurate reading of the coded information.

Furthermore, Daniel does not specify that the reader system comprises a reader housing having an opening where the holographic element/carrier is positioned. Jung discloses an identification security document and a display system for reading it (Fig. 5), wherein the security hologram 10 is positioned inside an appropriate reader apparatus 17 through an opening (see Fig. 5, and lines 25-46, col. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to read the security document of Drinkwater via a reader device as taught by Daniel in view of Jung, for achieving a robust reader device ensuring the same optical alignment each time the document is read.

Regarding claims 5, 24, the reader apparatus utilizes a microcomputer (lines 52-56, col. 6 in Daniel).

Regarding claim 6, the first and second detectors comprise arrays of detectors in the form of a CCD array 18 (lines 52-54, col. 6).

Regarding claims 14-16, Jung teaches that the authentication device is inserted through the aperture for reading the information stored in the grating (Fig. 4).

Regarding claims 21-22, the reproducing light for the security hologram of Drinkwater is polychromatic light.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hsiao (US 6,697,179, Fig. 1F) discloses a security device 100 comprising multiple holographic micro-patterns 21, 31, 41, superimposed on each other, however each hologram is in a separate plane.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-208. The examiner can normally be reached on M-F, 10-6.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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July 28, 2006



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